

FIG. 1A

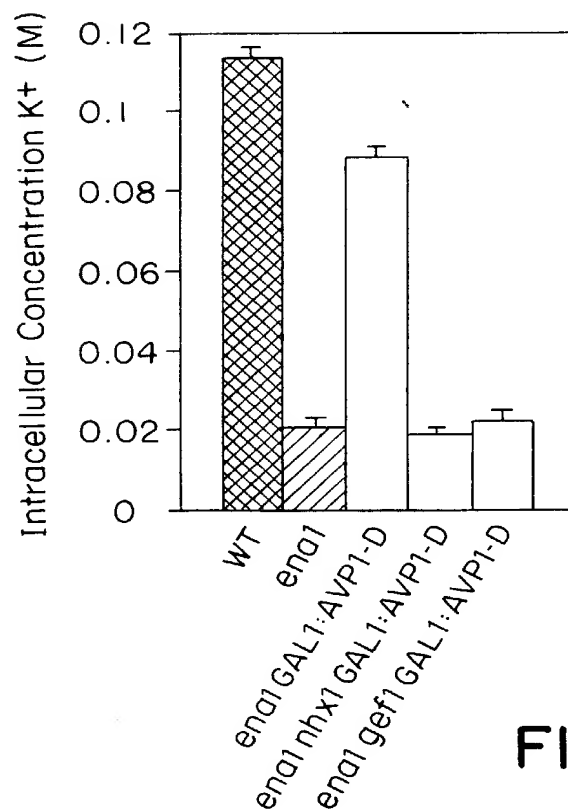


FIG. 1B

App No.: 09/834,998
Title: Proton Transporters And Uses In Plants
Inventors: Roberto A. Gaxiola, *et al.*

AtNhx1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
HsNhe-6	1	M	A	R	R	G	W	R	R	A	P	L	R	K	V	G	S	S	P	R	A	R	R	L	M	R	P	D	L	W	L	L	A	33	
ScNhx1	1	M	L	S	K	V	L	L	N	I	A	F	K	V	L	L	T	T	-	-	A	K	R	A	V	D	P	D	D	D	E	L	30		
AtNhx1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	L	D	S	L	V	S	K	L	P	S	L	S	T	15		
HsNhe-6	34	V	G	V	F	D	W	A	G	A	S	D	G	G	G	E	A	R	A	M	D	E	E	I	V	S	E	K	Q	A	E	S	66		
ScNhx1	31	L	P	S	P	D	L	P	G	S	D	D	P	I	A	G	-	-	-	-	D	P	D	V	D	L	N	P	V	T	E	E	58		
AtNhx1	16	D	H	A	S	V	V	A	L	N	L	F	V	A	L	L	C	A	C	I	V	L	G	H	L	L	E	E	N	-	-	R	W	46	
HsNhe-6	67	H	R	Q	D	S	A	N	L	L	I	F	I	L	L	L	T	L	T	I	L	T	I	W	L	F	K	H	R	R	A	R	F	99	
ScNhx1	59	F	S	-	-	S	W	A	L	F	I	M	L	L	L	L	I	S	A	L	W	S	S	Y	Y	L	T	Q	K	R	I	R	A	89	
AtNhx1	47	N	E	S	I	T	A	L	L	I	G	L	G	T	G	V	T	L	L	I	S	K	G	K	S	S	H	L	-	-	-	-	74		
HsNhe-6	100	H	E	T	G	L	A	M	I	Y	G	L	V	G	L	V	L	H	Y	G	-	I	H	V	P	S	D	V	N	N	V	T	131		
ScNhx1	90	H	E	T	V	L	S	I	F	Y	G	M	V	I	G	L	I	I	R	M	S	P	G	H	Y	I	Q	D	T	-	-	-	-	117	
AtNhx1	75	-	-	-	-	-	-	-	-	-	-	-	L	V	F	S	E	D	L	F	F	I	Y	L	L	P	P	I	F	N	A	G	95		
HsNhe-6	132	S	C	E	V	Q	S	S	P	T	T	L	L	V	T	F	D	P	E	V	F	F	N	I	L	L	P	P	I	I	F	Y	A	164	
ScNhx1	118	-	-	-	-	-	-	-	-	-	-	-	V	T	F	N	S	S	Y	F	F	N	V	L	L	P	P	I	I	L	N	S	138		
AtNhx1	96	F	Q	V	K	K	K	Q	F	F	R	N	F	V	T	I	M	L	F	G	A	V	G	T	I	I	S	C	T	I	I	S	L	128	
HsNhe-6	165	Y	S	L	K	R	R	H	F	F	R	N	L	G	S	I	L	A	Y	A	F	L	G	T	A	I	S	C	F	V	I	G	S	197	
ScNhx1	139	Y	E	L	N	Q	V	N	F	F	N	N	M	L	S	L	I	F	A	I	P	G	T	F	I	S	A	V	V	I	G	I	171		
AtNhx1	129	V	T	-	-	-	Q	F	F	K	K	L	D	I	G	T	F	D	L	G	D	Y	L	A	I	G	A	I	F	A	A	T	156		
HsNhe-6	198	Y	T	G	G	V	T	L	M	K	V	T	G	Q	L	A	G	D	F	Y	F	T	D	C	L	F	G	A	I	V	S	A	T	230	
ScNhx1	172	L	Y	-	-	-	I	W	T	F	L	G	L	E	S	I	D	I	S	F	A	D	A	M	S	V	G	A	T	L	S	A	T	200	
AtNhx1	157	D	S	V	C	T	L	Q	V	L	N	Q	D	E	T	-	P	L	L	Y	S	L	V	F	G	E	G	V	V	N	D	A	T	188	
HsNhe-6	263	D	P	V	T	V	L	A	I	F	H	E	L	Q	V	D	V	E	L	Y	A	L	L	F	G	E	S	V	L	N	D	A	V	263	
ScNhx1	201	D	P	V	T	I	L	S	I	F	N	A	Y	K	V	D	P	K	L	Y	T	I	I	F	G	E	S	L	L	N	D	A	I	233	
AtNhx1	189	V	V	V	F	N	A	I	Q	S	F	D	L	T	H	-	-	L	-	-	-	N	H	E	A	A	F	H	L	L	G	N	F	216	
HsNhe-6	264	I	V	L	S	S	I	V	A	Y	Q	P	A	G	D	N	S	H	T	F	D	V	T	A	M	F	K	S	I	G	I	F	L	296	
ScNhx1	234	I	V	M	F	E	T	C	Q	K	H	G	Q	P	-	A	T	-	-	F	S	S	-	V	F	E	G	A	G	L	F	L	261		
AtNhx1	217	Y	L	F	L	S	T	L	L	G	A	A	T	G	L	I	S	A	Y	V	I	K	K	L	Y	F	G	R	H	S	T	D	R	249	
HsNhe-6	297	G	I	F	S	G	S	F	A	M	G	A	A	T	G	V	V	T	A	L	V	T	K	F	T	K	L	-	R	E	F	Q	L	328	
ScNhx1	262	M	T	F	S	V	S	L	L	I	G	V	L	I	G	I	L	V	A	L	L	L	K	H	T	H	I	-	R	R	Y	P	Q	I	
AtNhx1	250	E	V	A	L	M	M	L	M	A	Y	L	S	Y	M	L	A	E	L	F	D	L	S	G	L	T	V	F	F	C	G	I	V	282	
HsNhe-6	329	E	T	G	L	F	F	L	M	S	W	S	T	F	L	L	A	E	A	W	G	F	T	G	V	V	A	V	L	F	C	G	I	361	
ScNhx1	294	E	S	C	L	I	L	L	I	A	Y	E	S	Y	F	F	S	N	G	C	H	M	S	G	I	V	S	L	L	F	C	G	I	326	
AtNhx1	283	Q	S	H	Y	T	W	H	N	V	T	E	S	S	R	I	T	T	K	H	T	F	A	T	L	S	F	L	A	E	T	F	I	315	
HsNhe-6	362	Q	A	H	Y	T	Y	N	N	L	S	T	E	S	S	Q	H	R	T	K	Q	L	F	E	L	N	F	L	A	E	N	F	I	394	
ScNhx1	327	L	K	H	Y	A	Y	Y	N	M	S	R	R	S	S	Q	I	T	I	K	Y	I	F	Q	L	L	A	R	L	S	E	N	F	I	359
AtNhx1	316	L	Y	V	G	M	D	A	L	D	I	D	K	W	R	S	V	S	D	T	P	G	T	S	I	A	V	S	S	I	L	M	G	L	348
HsNhe-6	395	S	Y	M	G	L	T	L	F	T	F	Q	N	H	-	-	V	F	N	P	T	F	V	V	G	A	F	V	A	I	F	L	-	423	
ScNhx1	360	I	Y	L	G	L	E	L	F	T	E	V	E	L	-	-	V	Y	K	P	L	L	I	I	V	A	A	I	S	I	C	V	-	388	
AtNhx1	349	V	M	V	G	R	A	A	F	V	F	P	L	S	F	L	S	N	L	A	K	K	N	Q	-	-	-	-	S	-	-	-	-	372	
HsNhe-6	424	-	-	-	G	R	A	A	N	I	Y	P	L	S	L	L	L	N	L	G	R	R	S	K	-	-	-	-	-	-	-	-	-	443	
ScNhx1	389	-	-	-	A	R	W	C	A	V	E	P	L	S	-	Q	F	V	N	W	I	Y	R	V	K	T	I	R	S	M	S	G	I	417	
AtNhx1	373	-	-	-	-	-	E	K	-	N	F	N	M	O	V	V	I	W	W	S	G	L	M	R	G	A	V	S	M	A	L	A	Y	399	
HsNhe-6	444	-	-	-	-	-	-	-	-	G	S	N	F	O	H	M	M	F	A	G	-	L	R	G	A	M	A	F	A	L	A	I	467		
ScNhx1	418	G	E	N	I	S	V	P	D	E	I	P	Y	N	Y	Q	M	M	T	F	W	A	G	-	L	R	G	A	V	G	V	A	L	449	
AtNhx1	400	N	K	F	T	R	A	G	H	T	D	V	R	G	N	A	I	M	I	T	S	T	I	T	V	C	L	F	S	T	V	V	F	G	432
HsNhe-6	468	R	D	T	A	T	Y	A	R	-	Q	M	F	S	T	T	L	L	I	V	F	F	T	V	W	V	F	G	G	T	T	A	499		
ScNhx1	450	L	G	I	Q	G	E	Y	K	-	F	T	L	L	A	T	V	L	V	V	V	V	L	T	V	I	I	F	G	G	T	T	A	480	
AtNhx1	433	M	L	T	K	P	L	I	S	Y	L	L	P	H	Q	N	A	T	T	L	-	-	-	S	M	L	S	D	D	T	K	P	K	S	461
HsNhe-6	500	M	L	S	C	L	H	I	R	V	G	V	D	S	D	Q	E	H	L	G	V	P	E	N	E	R	T	T	N	K	A	E	S	A	532
ScNhx1	481	G	M	L	E	V	L	N	I	K	T	G	C	I	S	E	E	D	T	G	S	-	-	-	D	D	E	F	D	I	E	A	P	R	509
AtNhx1	462	I	H	I	P	L	L	D	-	-	Q	D	S	F	I	E	P	S	G	N	H	N	V	P	-	-	-	-	R	P	D	S	I	R	488
HsNhe-6	533	W	L	F	R	M	W	Y	N	F	D	H	N	Y	L	K	P	L	L	T	H	S	G	P	P	L	T	T	T	L	P	A	C	C	565
ScNhx1	510	A	I	N	L	L	N	G	S	-	S	I	Q	T	D	L	G	P	Y	S	D	N	N	S	P	D	I	S	I	D	Q	F	A	V	541
AtNhx1	489	G	F	L	T	R	P	T	R	T	V	H	Y	Y	W	R	Q	F	D	D	S	F	M	R	P	-	V	F	G	G	R	G	F	V	520
HsNhe-6	566	G	P	I	A	R	C	L	T	S	P	Q	A	Y	E	N	Q	E	Q	L	K	D	D	D	S	D	L	I	L	N	D	G	D	I	598
ScNhx1	542	S	S	N	K	N	L	P	N	I	S	T	T	G	G	N	T	F	G	G	L	N	E	T	E	N	T	S	P	N	P	A	R	574	
AtNhx1	521	P	F	V	P	G	S	P	T	E	R	N	P	P	D	L	S	K	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	538	
HsNhe-6	599	S	L	T	Y	G	D	S	T	V	N	T	E	P	A	T	S	S	A	P	R	R	F	M	G	N	S	S	E	D	A	L	D	R	631
ScNhx1	575	S	S	M	D	K	R	N	L	R	D	K	L	G	T	I	F	N	S	D	S	Q	W	F	Q	N	-	-	F	D	E	Q	V	L	605
HsNhe-6	632	E	L	A	F	G	D	H	E	L	V	I	R	G	T	R	L	V	L	P	M	D	D	S	E	P	P	L	N	L	L	D	N	T	664
ScNhx1	606	K	P	V	F	L	D	N	V	S	P	S	L	Q	D	S	A	T	Q	S	P	A	D	F	S	S	Q	N	H	-	-	-	-	-	633
HsNhe-6	665	R	H	G	P	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	669	

FIG 2

App No.: 09/834,998
Title: Proton Transporters And Uses In Plants
Inventors: Roberto A. Gaxiola, *et al.*

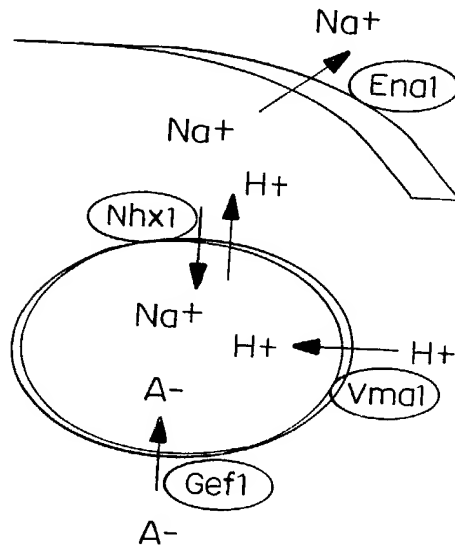


FIG. 3A

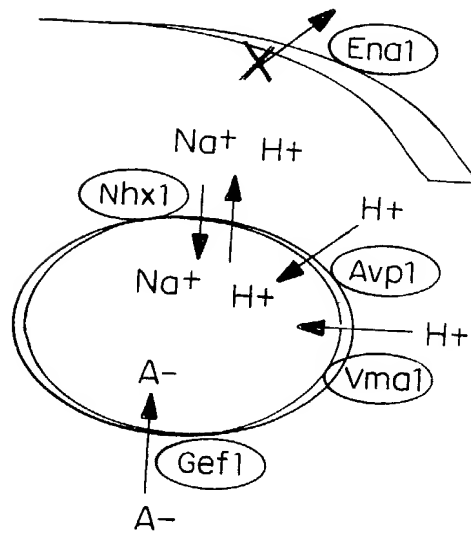


FIG. 3B